

IN THE CLAIMS

10. (Currently Amended) A process for controlling a multistage pump to dispense a fluid, the multistage pump having a feed chamber, a dispensation chamber, and an outlet valve of the multistage pump coupled to the dispensation chamber, the process comprising:

a first stage, wherein while a first valve between the feed chamber and the dispensation chamber is closed and the outlet valve is closed, the dispensation chamber is brought to an equilibrium pressure state; and

a second stage, wherein a dispensation pump disposed in the dispensation chamber is activated to dispense the fluid through the outlet valve and onto an object upon opening the outlet valve and activating the dispensation pump.

12. (Previously Presented) The process of Claim 18, wherein excess fluid spitting is substantially eliminated from the dispensation chamber.

14. (Previously Presented) The process of claim 10, wherein a stepper motor is used in bringing the dispensation chamber to the equilibrium pressure state.

15. (Previously Presented) The process of claim 10, wherein the equilibrium pressure state is approximately 0 psi.

16. (Previously Presented) The process of claim 10, wherein during the second stage, the outlet valve is opened before the dispensation pump is activated.

17. (Previously Presented) The process of claim 16, wherein during the second stage, a period of time elapses between a time when the outlet valve is opened and before a time when the dispensation pump is activated.

18. (Previously Presented) The process of claim 16, further comprising a third stage, wherein the dispensation pump is operated in reverse to suck back part of the fluid into the dispensation chamber, and wherein the outlet valve is closed after the part of the fluid is sucked back into the dispensation chamber.

19. (Previously Presented) The process of claim 16, wherein:
a filter lies between the feed chamber and the dispensation chamber; and

the first valve lies between the filter and the dispensation chamber.

20. (Previously Presented) The process of claim 19, further comprising:

a fill stage, wherein an inlet valve to the multistage pump is coupled to the feed chamber and during the fill stage, while the inlet valve is open, a second valve lying between the feed chamber and the filter is closed, and a vent valve is closed, the feed chamber is put under vacuum to allow the fluid enter the feed chamber;

a filter stage, wherein during the filter stage, while the inlet valve is closed, the first valve is opened, and the second valve is opened, pressure is applied to the feed chamber so that the fluid flows through the filter; and

a vent stage, wherein during the vent stage, while the fluid in the feed chamber is under pressure, the inlet valve is closed, the first valve is closed, the second valve is opened, and a vent valve is opened.

21. (Previously Presented) The process of claim 10, wherein:

a purge valve is coupled to the dispensation chamber;

during the first stage, the purge valve is open; and

during the second stage, the purge valve is closed.

22. (Previously Presented) The process of claim 10, wherein the fluid has a viscosity less than approximately five centipoise.

23. (Currently Amended) A process for controlling a multistage pump to dispense a fluid, the multistage pump having a feed chamber, a dispensation chamber, and an outlet valve of the multistage pump coupled to the dispensation chamber, the process comprising a first stage, wherein after the outlet valve is opened, a dispensation pump disposed in the dispensation chamber is activated to dispense the fluid through the outlet valve and onto an object.

24. (Previously Presented) The process of claim 23, wherein during the first stage, a period of time elapses between a time when the outlet valve is opened and before a time when the dispensation pump is activated.

25. (Previously Presented) The process of claim 23, further comprising a second stage performed before the first stage, wherein while a first valve between the feed chamber

and the dispensation chamber is closed and the outlet valve is closed, a stepper motor is used to bring the dispensation chamber to substantially atmospheric pressure.

26. (Previously Presented) The process of claim 25, wherein:
a purge valve is coupled to the dispensation chamber;
during the first stage, the purge valve is closed; and
during the second stage, the purge valve is open.
27. (Previously Presented) The process of claim 23, wherein:
a filter lies between the feed chamber and the dispensation chamber; and
the first valve lies between the filter and the dispensation chamber.
28. (Previously Presented) The process of claim 27, further comprising:
a fill stage, wherein an inlet valve to the multistage pump is coupled to the feed chamber and during the fill stage, while the inlet valve is open, a second valve lying between the feed chamber and the filter is closed, and a vent valve is closed, the feed chamber is put under vacuum to allow the fluid enter the feed chamber;
a filter stage, wherein during the filter stage, while the inlet valve is closed, the first valve is opened, and the second valve is opened, pressure is applied to the feed chamber so that the fluid flows through the filter; and
a vent stage, wherein during the vent stage, while the fluid in the feed chamber is under pressure, the inlet valve is closed, the first valve is closed, the second valve is opened, and a vent valve is opened.
29. (Previously Presented) The process of claim 23, further comprising a second stage performed after the first stage, wherein the dispensation pump is operated in reverse to suck back part of the flow into the dispensation chamber, and wherein the outlet valve is closed after an amount of fluid is sucked back into the dispensation chamber.
30. (Previously Presented) The process of claim 23, wherein the fluid has a viscosity less than approximately five centipoise.